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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,340	01/26/2001	Alastair M. Reed	EWG-136 US	6795
23735	7590	03/17/2004		
DIGIMARC CORPORATION 19801 SW 72ND AVENUE SUITE 250 TUALATIN, OR 97062			EXAMINER DASTOURI, MEHRDAD	
			ART UNIT 2623	PAPER NUMBER 9

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/771,340

Applicant(s)

REED ET AL.

Examiner

Mehrdad Dastouri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2,3,4,5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-3, 10-14, 16 and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by background of the instant application.

Regarding Claim 1, background of the instant application discloses, as a known technique, a method of filtering data (Page 2, Lines 1-5) prior to reading a digital watermark that was inserted using a scale to black technique (Page 1, Lines 18-21) comprising the steps of first projecting the color values of each pixel onto a preferred projection axis that is determined by examining the color of the surrounding pixels, and by reading the watermark from the resulting data (Page 1, Lines 16-27).

With regards to Claims 2, 3, 10-14 and 16, arguments analogous to those presented for Claim 1 are applicable to Claims 2, 3, 10-14 and 16. Claims limitations are taught by disclosure background, Page 1, Line 8 through Page 2, Line 7. Each pixel in colored images inherently represented by a set of numbers representing different colors (Also Background of the instant application, Page 1, Lines 8-12).

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With regards to Claim 20, arguments analogous to those presented for Claims 1-3 are applicable to Claim 20. Fundamentally, extracting watermarks will be performed around the color axis used to embed the watermark that definitely approximates this axis.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawakami et al (U.S. 5,652,626).

Regarding Claim 17, Kawakami et al disclose a method of inserting first and second watermark in an image comprising:

Inserting said first watermark in said image in a first color direction and inserting said second watermark in a color direction orthogonal to the color direction of said first watermark (Column 17, Lines 30-67, Column 18, Lines 1-66. Formulas 37-39 illustrate different watermarks are embedded in first, second and three color directions (R,G and B in RGB color space. These directions are inherently orthogonal.).

Regarding Claim 19, Kawakami et al further disclose the method recited in Claim 17 wherein the intensity of said second watermark is lower than the intensity of the first watermark (Formulas 37-39, different watermarks have different intensities.).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over background of the instant application.

With regards to Claims 4 and 5, it is a conventional procedure to examine a particular tile size of at least a 3 x 3 kernel (an area of three by three pixels that includes the pixel of interest as a center pixel) for obtaining the intended image pre-processing, processing and post-processing objectives because it is a well known procedure routinely implemented in the art to obtain adequate information regarding pixel intensity variations in the processed digital image.

With regards to Claims 6-9 and 15, arguments analogous to those presented for Claims 4 and 5 are applicable to Claims 6-9 and 15.

7. Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al (U.S. 5,652,626) and background of the instant application.

Regarding Claim 18, arguments analogous to those presented for Claims 3 and 17 are applicable to Claim 18. Kawakami et al further disclose the method of extracting two orthogonally inserted watermarks (Column 23, Lines 55-67, Column 24, Lines 1-40).

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of the background of the instant application suggesting embedding watermark in different color axes according to the teachings of Kawakami et al to implement limitations recited in Claim 18 because it will expand the versatility of the watermarking system and will provide more robust embedded information.

***Other prior art cited***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,185,312 to Nakamura et al;

U.S. Patent 6,334,187 to Kadono;

U.S. Patent 6,332,031 to Rhoads et al;

U.S. Patent 6,246,777 to Agarwal et al.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mehrdad Dastouri  
Primary Examiner  
Art Unit 2623  
March 13, 2004

**MEHRDAD DASTOURI**  
**PRIMARY EXAMINER**

*Mehrdad Dastouri*